1.write a c program to find first and last digits of a number?

```
#include <stdio.h>

int main() {
	int number, firstDigit, lastDigit;

	// Prompt the user to enter a number
	printf("Enter any number: ");
	scanf("%d", &number);

	// Find the last digit using the modulo operator
	lastDigit = number % 10;

	// Find the first digit by repeatedly dividing the number by 10
	// until only one digit remains
	firstDigit = number; // Initialize firstDigit with the number
	while (firstDigit >= 10) {
		firstDigit /= 10;
	}

	// Print the first and last digits
	printf("First digit = %d\n", firstDigit);
	printf("Last digit = %d\n", lastDigit);

	return 0;
}
```

2.find the factorial of a given number?

```
#include <stdio.h>

int main() {
	int n, factorial = 1;

	printf("Enter a non-negative integer: ");
	scanf("%d", &n);

	if (n < 0) {
		printf("Factorial is not defined for negative numbers.\n");
	} else if (n == 0) {
		printf("Factorial of 0 is 1.\n");
	} else {
		for (int i = 1; i <= n; i++) {
			factorial *= i; // factorial = factorial * i;
		}
		printf("Factorial of %d is %d\n", n, factorial);
	}

	return 0;
}
```

3.find the given number is prime or not?

```
#include <stdio.h>

int main() {
	int number, i, isPrime = 1; // Declare variables: number for input, i for loop, isPrime as a flag

	// Prompt the user for input
	printf("Enter a positive integer: ");
```

```
    scanf("%d", &number);

    // Handle special cases: numbers less than or equal to 1 are not prime
    if (number <= 1) {
        isPrime = 0; // Set flag to indicate not prime
    } else {
        // Check for factors from 2 up to the square root of the number
        // Iterating up to number/2 or sqrt(number) optimizes the process
        for (i = 2; i * i <= number; i++) {
            if (number % i == 0) {
                isPrime = 0; // If a factor is found, it's not prime
                break;          // Exit the loop as no further checks are needed
            }


     }
    }

    // Print the result based on the isPrime flag
    if (isPrime == 1) {
        printf("%d is a prime number.\n", number);
    } else {
        printf("%d is not a prime number.\n", number);
    }

    return 0; // Indicate successful execution
}
4.pr int the given number is strong number or not?
#include <stdio.h>

// Function to calculate factorial of a number
long long factorial(int n) {
    long long fact = 1;
    for (int i = 1; i <= n; i++) {
        fact *= i;
    }
    return fact;
}

int main() {
    int number, temp_number, digit;
    long long sum_of_factorials = 0;

    printf("Enter a number: ");
    scanf("%d", &number);

    temp_number = number; // Store the original number for comparison

    // Calculate the sum of factorials of digits
    while (temp_number > 0) {
        digit = temp_number % 10; // Extract the last digit
        sum_of_factorials += factorial(digit); // Add factorial of the digit to the sum
        temp_number /= 10; // Remove the last digit
    }

    // Check if the number is strong
    if (sum_of_factorials == number) {
```

```
            printf("%d is a Strong Number.\n", number);
        } else {
            printf("%d is not a Strong Number.\n", number);
        }

        return 0;
}
```

5.find sum of all digits ina a number?

```
#include <stdio.h>

int main() {
        int num, sum = 0, digit;

        // Prompt the user to enter a number
        printf("Enter a number: ");
        scanf("%d", &num);

        // Loop until the number becomes 0
        while (num != 0) {
            // Extract the last digit using the modulo operator
            digit = num % 10;

            // Add the extracted digit to the sum
            sum += digit;

            // Remove the last digit by integer division
            num /= 10;
        }

        // Print the final sum of the digits
        printf("Sum of the individual digits: %d\n", sum);

        return 0;
}
```